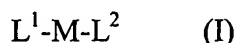


**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings of claims in the application

**Listing of Claims:**

Claim 1 (original): Transition metal complex of the formula (I)

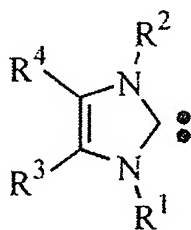


where

M is a nickel, palladium or platinum atom,

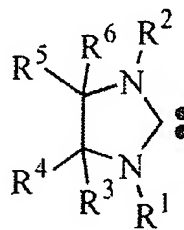
$L^1$  is a ligand having at least one electron-deficient olefinic double bond and

$L^2$  is a monodentate carbene ligand of the formula (II) or (III)



5

(II)



(III)

in which

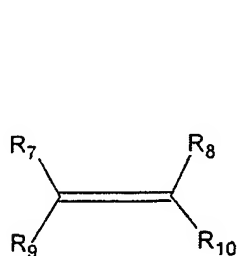
the  $R^1$  and  $R^2$  radicals are each independently an alkyl radical including a cycloalkyl radical, an aryl radical or heteroaryl radical, each of which may optionally be substituted, and the  $R^3$  to  $R^6$  radicals are each independently selected from a hydrogen or halogen atom,  $-NO_2$ ,  $-CN$ ,  $-COOH$ ,  $-CHO$ ,  $-SO_3H$ ,  $-SO_2-(C_1-C_8)alkyl$ ,  $-SO-(C_1-C_8)alkyl$ ,  $-NH-(C_1-C_8)alkyl$ ,  $-N((C_1-C_8)alkyl)_2$ ,  $-NHCO-(C_1-C_4)alkyl$ ,  $-CF_3$ ,  $-COO-(C_1-C_8)alkyl$ ,  $-CONH_2$ ,  $-CO-(C_1-C_8)alkyl$ ,  $-NHCOH$ ,  $-NH-COO-(C_1-C_4)alkyl$ ,  $-CO-phenyl$ ,  $-COO-phenyl$ ,  $-CH=CH-CO_2-(C_1-C_8)alkyl$ ,  $-CH=CHCO_2H$ ,  $-PO(phenyl)_2$ ,  $-PO((C_1-C_8)alkyl)_2$ ,

an optionally substituted alkyl radical, an optionally substituted aryl radical, or an optionally substituted heteroaryl radical, or at least two of the  $R^3$  to  $R^6$  radicals together with the carbon atoms to which they are bonded form a 4- to 12-membered ring.

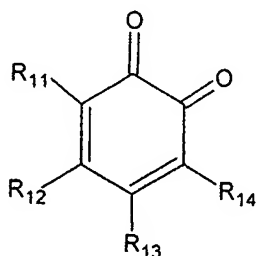
Claim 2 (original): Transition metal complex according to Claim 1 where M is Pd.

Claim 3 (currently amended): Transition metal complex according to Claim 1 [[or 2]] where the electron-deficient olefinic double bond in  $L^1$  bears at least one electron-withdrawing substituent selected from a cyano group, an aldehyde group, a ketyl radical, a carboxylic acid group, a carboxylic ester radical, carboxamide radical or N-substituted carboxamide radical.

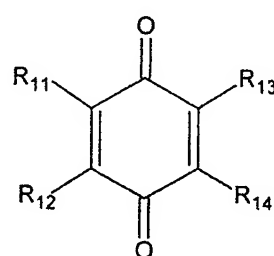
Claim 4 (currently amended): Transition metal complex according to ~~one of Claims 1 to 3~~ Claim 1 where  $L^1$  is selected from compounds of the formulae (IV), (V) or (VI)



(IV)



(V)



(VI)

in which

$R^7$  is selected from -CN, -COH, -COR<sup>15</sup>, -COOH, -COOR<sup>15</sup>, -CONHR<sup>15</sup>, and -CONR<sup>15</sup>R<sup>16</sup>, where  $R^{15}$  and  $R^{16}$  are each independently a hydrogen atom, a C<sub>1</sub>-C<sub>6</sub> alkyl radical or C<sub>2</sub>-C<sub>6</sub> alkenyl radical; and

$R^8$ ,  $R^9$  and  $R^{10}$  are each independently selected from a hydrogen atom, a C<sub>1</sub>-C<sub>8</sub> alkyl radical, a C<sub>2</sub>-C<sub>8</sub> alkenyl radical, a halogen atom, a hydroxyl group, -CN, -COH, -COR<sup>15</sup>, -COOH, -COOR<sup>15</sup>, -CONHR<sup>15</sup> and -CONR<sup>15</sup>R<sup>16</sup>, where  $R^{15}$  and  $R^{16}$  are each as defined

above,

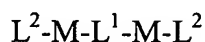
or two suitable  $R^7$ ,  $R^8$ ,  $R^9$ ,  $R^{10}$ ,  $R^{15}$  and  $R^{16}$  radicals together with the atoms to which they are bonded form a 5- to 8-membered ring,

$R^{11}$ ,  $R^{12}$ ,  $R^{13}$  and  $R^{14}$  are each independently selected from a hydrogen atom, a  $C_1$ - $C_8$  alkyl radical, a halogen atom or -CN, or in each case two of the  $R^{11}$  to  $R^{14}$  substituents together with the atoms to which they are bonded form a 5- to 8-membered ring.

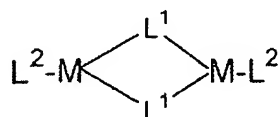
Claim 5 (currently amended): Transition metal complex according to ~~one of Claims 1 to 4~~ Claim 1 where  $L^1$  is selected from acrylic acid, acrylic esters, acrylonitrile, methacrylic acid, methacrylic esters, methacrylonitrile, benzoquinone, 2-methyl-p-benzoquinone, 2,5-dimethyl-p-benzoquinone, 2,3-dichloro-5,6-dicyano-p-benzoquinone, naphthoquinone, anthraquinone, maleic anhydride, maleimide, maleic acid, maleic esters, fumaric acid, fumaric esters, metal salts of the carboxylic acids mentioned, or tetracyanoethene.

Claim 6 (currently amended): Transition metal complex according to ~~one of Claims 1 to 5~~ Claim 1 where  $L^2$  is selected from 1,3-bis(2,4,6-trimethylphenyl)imidazolinylidene, 1,3-bis(2,6-dimethylphenyl)imidazolinylidene, 1,3-bis(1-adamantyl)imidazolinylidene, 1,3-bis(tert-butyl)imidazolinylidene, 1,3-bis(cyclohexyl)imidazolinylidene, 1,3-bis(o-tolyl)imidazolinylidene, 1,3-bis(2,6-diisopropyl-4-methylphenyl)imidazolinylidene and 1,3-bis(2,6-diisopropylphenyl)imidazolinylidene and 1,3-bis(2,6-diisopropylphenyl)imidazolinylidene, 1,3-bis(2,4,6-trimethylphenyl)-4,5-dihydroimidazolinylidene, 1,3-bis-(2,6-dimethylphenyl)-4,5-dihydroimidazolinylidene, 1,3-bis(1-adamantyl)-4,5-dihydroimidazolinylidene, 1,3-bis-tert-butyl)-4,5-dihydroimidazolinylidene, 1,3-bis(cyclohexyl)-4,5-dihydroimidazolinylidene, 1,3-bis(o-tolyl)-4,5-dihydroimidazolinylidene, 1,3-bis(2,6-diisopropyl-4-methylphenyl)-4,5-dihydroimidazolinylidene and 1,3-bis(2,6-diisopropylphenyl)-4,5-dihydroimidazolinylidene.

Claim 7 (currently amended): Transition metal complex of the following structure (Ia) or (Ib)



(Ia)



(Ib)

where  $L^1$ ,  $L^2$  and M are each independently as defined in ~~one of Claims 1 to 6~~ Claim 1, with the proviso that the bridging  $L^1$  radical is selected in such a way that it has a further coordination site for an Ni, Pt or Pd atom.

Claim 8 (currently amended): Process for preparing a transition metal complex according to Claim 1 ~~one of Claims 1 to 7~~, comprising the contacting of the ligand  $L^2$  with a metal complex which contains the fragment  $L^1-M$  and an additional ligand which can be displaced readily by the ligand  $L^2$ , where  $L^1$ , M and  $L^2$  are each as defined in Claims 1 to 7.

Claim 9 (currently amended): Use of a transition metal complex according to ~~one of Claims 1 to 7~~ Claim 1 in the homogeneous catalysis of an organic reaction.

Claim 10 (original): Use according to Claim 9, wherein the organic reaction is selected from olefinations, arylations, alkylations, ketone arylations, aminations, etherifications, thiolizations, silylations, carbonylations, cyanations or alkynylations of aryl-X compounds or vinyl-X compounds, where X is a leaving group, or of olefinic compounds, or from hydrosilylations of olefins or alkynes or ketones, carbonylations of olefins, di- and oligomerizations of olefins, telomerization of dienes or cross-couplings with organometallic reagents and other transition metal-catalysed coupling reactions.